FOR ADMINISTRATIVE USE

CDC INFLUENZA SURVEILLANCE REPORT

NO. 36 FEBRUARY 25, 1958

U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service Bureau of State Services
Communicable Disease Center - Robert J. Anderson, M. D., Chief
Surveillance Section - Mario Pizzi, M. D., Chief

Keith E. Jensen, Ph. D.
CDC Virus and Rickettsia Section*
P. O. Box 61
Montgomery 1, Alabama
Telephone No. AMherst 3-4468

*Serving as WHO International Influenza Center for the Americas

Yates Trotter, Jr., M. D.
Frederick L. Dunn, M. D.
Influenza Surveillance Unit
50 Seventh Street, N. E.
Atlanta 23, Georgia
Telephone No. TRinity 6-3311 Extension 5455

SPECIAL NOTE

Information contained in this report is a summary of data reported to CDC by State Health Departments, Epidemic Intelligence Service Officers, collaborating influenza diagnostic laboratories, and other pertinent sources. Much of it is preliminary in nature and is intended for those involved in influenza control activities. Anyone desiring to quote this information is urged to contact the person or persons primarily responsible for the items reported in order that the exact interpretation of the report and the current status of the investigation be obtained. State Health Officers, of course, will judge the advisability of releasing any information from their own states.

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I. Summary of Information

Deaths due to influenza and pneumonia for the nation as a whole showed a 7% increase over the figure for last week. Although epidemic influenza is not occurring on a broad scale, it seems likely that influenza underlies many of these deaths. At the present time, most of the deaths are occurring in the infirm and aged members of the population. These persons might have escaped exposure during the fall epidemic peak because of their relatively secluded lives. The case fatality rate in such persons would naturally be much higher than in the general population, which would explain the large number of deaths. Most of the school children, servicemen, and working adults were probably exposed during the fall and are now relatively immune. As a result, industrial absenteeism and school absenteeism are not markedly elevated. We are trying to test these hypotheses by epidemiologic investigations at the present time.

WEEKLY PNEUMONIA AND INFLUENZA DEATHS

"EPIDEMIC THRESHOLD"

"NORMAL INCIDENCE"

(SEE EXPLANATION ON BACK OF SHEET)

UNITED STATES, 108 Cities

SOUTH ATLANTIC, 9 Cities

NEW ENGLAND, 14 Cities

EAST SOUTH CENTRAL, 8 Cities

MIDDLE ATLANTIC, 17 Cities

WEST SOUTH CENTRAL, 13 Cities

EAST NORTH CENTRAL, 18 Cities

MOUNTAIN, 8 Cities

WEST NORTH CENTRAL, 9 Cities

PACIFIC, 12 Cities

NUMBER OF DEATHS

SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG

1957 1958

DHEW-PHS-BSS-CDC

ATLANTA, GA. JAN., 1958

Interpretation of "Epidemic Threshold"

If two successive weeks incidence in excess of the "epidemic threshold" is defined as a "run of two", then with "normal incidence" a "run of two" will be uncommon. When incidence exceeds normal levels a "run of two" will be more likely to occur. Specifically, with normal incidence, the odds against one or more "runs of two" during a period of 52 weeks are four to one. If incidence increases above normal by two standard deviations the odds are even that a "run of two" will follow immediately.

A description of the method used in constructing the charts is given in Influenza Surveillance Report No. 16.

II. Current Analysis of Influenza and Pneumonia Mortality*

Table I. Current Influenza and Pneumonia Deaths in 108 United States Cities

Division	Number of Cities In Study	Number of Cities Reporting this week	Deaths (including estimates**) during weeks ending Feb. 8 (105 cities)	Feb. 15 (103 cities)	Feb. 22 (101 cities)
All Divisions	108	101	713	711	760
New England	14	13	38	49	50
Mid. Atlantic	17	16	192	186	219
E. North Central	18	17	166	158	158
W. North Central	9	9	40	49	66
S. Atlantic	9	9	49	67	75
E. South Central	8	7	65	48	38
W. South Central	13	10	86	85	83
Mountain	8	8	16	14	15
Pacific	12	12	61	55	56

**The number of deaths given includes estimates for cities not reporting in a given week. The table is corrected for preceding weeks as late figures are received. The chart will be corrected only for gross discrepancies.

Comment

Deaths due to influenza and pneumonia for the nation as a whole showed a seven percent increase over the figure for last week. The increase is largely confined to the Atlantic seaboard and North Central states. The South Central states showed a decline, although remaining well above expected levels. The Mountain states continue at expected seasonal level while the Pacific states remain somewhat elevated.

The number of influenza and pneumonia deaths reported in 25 large cities throughout the nation each week since the first of the year are as follows:

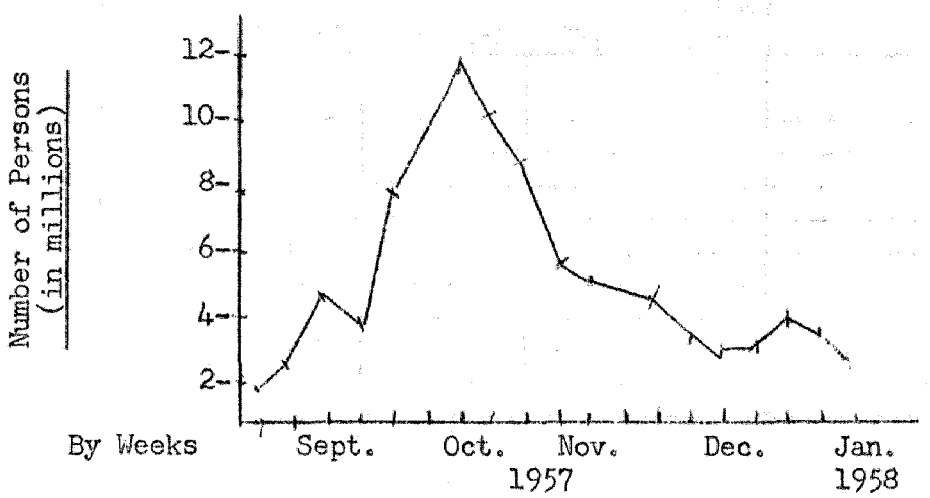
*Prepared by the Statistics Section, CDC

1958

City	1-4	1-11	1-18	1-25	2-1	2-8	2-15	2-22
Boston	9	7	16	15	14	13	19	16
Providence	2	7	5	3	4	1	3	4
New York City	85	91	108	128	155	131	122	131
Newark	4	11	6	4	8	4	3	6
Philadelphia	14	27	19	13	29	22	20	37
Pittsburgh	7	13	5	1	7	11	3	6
Chicago	44	51	57	67	64	70	66	58
Milwaukee	2	3	2	7	9	11	5	9
Detroit	8	12	20	33	24	29	31	22
Cincinnati	7	4	1	5	6	4	3	8
Indianapolis	2	6	1	7	8	8	4	6
Des Moines	2	2	5	2	5	3	3	2
Kansas City, Mo.	6	5	2	5	9	8	8	10
St. Louis	10	19	29	23	30	12	12	30
Atlanta	10	12	13	9	5	4	5	11
Baltimore	11	8	8	10	12	11	17	19
Washington	10	14	13	12	22	17	18	17
Birmingham	2	6	8	8	5	10	6	12
Memphis	4	3	4	9	8	15	8	5
New Orleans	16	21	14	20	20	14	21	7
Houston	14	9	14	14	23	20	11	16
San Antonio	11	16	9	9	15	7	7	8
Denver	3	5	9	5	8	4	6	6
Los Angeles	21	15	19	27	13	28	22	25
San Francisco	7	8	12	14	11	8	4	7
Total	311	375	399	450	514	465	427	478
Percent of influenza and pneumonia deaths in 108 cities	58.5	59.2	61.3	66.7	68.5	65.2	60.1	62.9

III. Data from National Health Survey (Under the direction of Dr. F. Linder)

New Cases



ACUTE UPPER RESPIRATORY DISEASES*
Estimates for continental United States

Week	New Cases Involving One or More Days of Bed Disability
Sept 29 - Oct 5	7,773,000
Oct 6 - 12	9,712,000
Oct 13 - 19	11,933,000
Oct 20 - 26	11,033,000
Oct 27 - Nov 2	9,808,000
Nov 3 - 9	8,297,000
Nov 10 - 16	5,648,000
Nov 17 - 23	5,305,000
Nov 24 - 30	3,339,000
Dec 1 - 7	4,271,000
Dec 8 - 14	3,667,000
Dec 15 - 21	3,241,000
Dec 22 - 28	3,430,000
Dec 29 - Jan 4	4,092,000
Jan 5 - 11	3,683,000
Jan 12 - 18	**2,274,000

*Including influenza, pneumonia, and other similar conditions.
**Provisional.

The above data are compiled from the household interview survey which is a part of the program of the U. S. National Health Survey. The household survey is conducted by trained and supervised lay interviewers. The weekly samples consist of interviews for about 700 households or 2,200 persons. Since data are collected for the two prior weeks, each week's interviewing gives information on 4,400 person-weeks of health experience. Approximate sampling errors are in the range of 15%. The estimates of sampling error do not include allowance for error of response and non-reporting.

IV. Industrial Absentee Rates for 36 Cities of the United States

City	% of Total Absent					
	Average for January 1957	Week Ending (1958) Jan. 18	Jan. 25	Feb.1	Feb.8	Feb.15
Boston	9.6	9.4	9.6	9.5	9.2	10.0
Manhattan	4.5	5.0	5.0	5.4	5.0	4.8
Buffalo	6.9	6.0	6.7	6.4	6.6	6.8
Syracuse	6.5	6.6	6.2	6.6	7.4	6.1
Philadelphia	6.3	7.0	7.2	7.5	7.3	8.1
Pittsburgh	4.9	5.6	5.3	5.5	5.9	4.8
Washington	7.1	5.5	6.1	6.6	6.5	7.4
Baltimore	7.1	5.9	6.2	5.9	6.0	6.4
Richmond	4.9	5.9	6.6	6.2	6.2	6.0
Atlanta	5.8	4.5	4.8	5.9	5.9	5.7
Miami	6.7	7.5	9.4	8.5	8.3	8.0
Memphis	4.7	4.5	5.0	6.1	4.2	3.7
Birmingham	5.9	3.6	5.2	6.9	8.3	6.1
Nashville	4.7	4.6	4.4	4.7	4.8	5.0
Jacksonville	7.8	7.0	6.6	6.6	6.9	7.9
New Orleans	7.0	7.0	7.4	6.4	6.6	6.4
Cleveland	3.7	4.0	3.6	3.8	4.2	4.4
Columbus	5.1	3.6	3.5	5.2	4.1	5.4
Cincinnati	4.9	4.5	3.9	4.0	4.5	6.3
Detroit	7.1	7.9	8.7	7.0	8.0	8.3
Indianapolis	5.4	3.5	4.0	4.5	5.0	5.3
Milwaukee	6.6	7.6	9.5	8.9	8.4	8.0
Chicago	6.5	6.7	6.8	7.2	6.4	6.4
Minneapolis	5.4	5.1	5.2	5.1	4.7	5.8
Omaha	6.2	6.5	6.0	7.3	5.5	6.4
St. Louis	4.5	3.9	4.8	5.7	5.0	4.8
Kansas City	4.0	4.3	7.8	4.6	3.7	4.1
Houston	4.0	10.3	7.4	6.0	5.7	6.3
Dallas	4.7	5.3	6.2	6.2	8.5	8.6
Oklahoma City	4.6	4.0	4.3	4.0	4.5	4.4
Denver	7.4	6.0	5.9	5.7	6.4	6.2
Phoenix	7.8	7.0	6.9	7.8	5.7	5.9
Salt Lake City	4.1	7.3	6.2	7.9	7.7	7.2
San Francisco	9.4	7.8	7.4	7.5	8.1	8.2
Seattle	4.8	6.1	6.5	6.4	6.2	6.1
Los Angeles	5.1	3.7	4.1	4.3	3.7	2.6

V. Influenza Deaths and Complications: Bacterial Findings

(Reported by Dr. U. Pentti Kokko and Dr. Elaine Updyke, Laboratory Branch, CDC.)

Dr. Updyke has received so far, in response to a request printed in Influenza Surveillance Report No. 26, 194 bacterial cultures from fatal or complicated cases of influenza. These cultures divide as follows:

Staphylococcus	120
Streptococcus	41
Pneumococcus	2
Gram-negative rods	31
	194

Of the staphylococcal cultures, 94 were coagulase positive. The phage typing of these cultures showed a variety of patterns. The gram-negative rods divide as follows:

Pseudomonas	7
Klebsiella	6
Coliform	6
Mima	5
Achromobacter	2
Hemophilus	1
Aerogenes	1
Proteus	1
Unidentified	2

Since Klebsiella-Pneumoniae are frequently mentioned as a possible complication of influenza, it is interesting to compare the number of Klebsiellas and related organisms sent to CDC for identification during two consecutive years (Table I).

Table I - Number of Klebsiellas and Aerobacter Cultures Sent to CDC Enteric Bacteriology Unit for Identification and Typing

		Klebsiella	Aerobacter
1956			
Jan - Mar		81	12
Apr - June		29	7
Jul - Sept		63	9
Oct - Dec		103	37
	Total	276	65
1957			
Jan - Mar		55	8
Apr - June		19	5
Jul - Sept		42	11
Oct - Dec		45	8
	Total	161	32
1958 - 5 weeks		13	1

The most common Klebsiellas received for identification and typing during 1957 are shown below. No change in the relative type frequency was noticed during the influenza season.

Klebsiella Type	Number
2	10
7	11
8	15
19	14
24	8
30	12
Various types	91
Total	161

Note: The CDC Laboratory Branch continues to be interested in receiving subcultures of staphylococcus, pneumococcus, streptococcus, hemophilus and klebsiella strains isolated from influenza cases complicated with pneumonia, and especially from fatal cases. Each culture should be well identified for a possible later reference. The strains should be well packaged and mailed in the regular manner to:

Communicable Disease Center
Laboratory Branch
P.O. Box 185
Chamblee, Georgia
Attn: Dr. Elaine L. Updyke

VI. International Notes

The January rise in influenza and pneumonia excess mortality in the United States was also noted in the British Isles (see CDC Influenza Surveillance Report No. 35, page 6) although the rise began and peaked about four weeks ahead of that in this country. The Influenza Surveillance Unit has not received information of such a rise in any other country. Reports of scattered influenza outbreaks continue to appear from European countries but, as in the United States, there have been no reports of recurrent community-wide epidemics. Few of the recent European outbreaks have been confirmed as due to the Asian strain. To date no other country has reported a second heavy Asian strain epidemic such as that that occurred in Japan in October and November. The epidemic in Japan had apparently reached its end by the last week of December. The initial Asian strain epidemics in the Scandinavian countries also ended at about this time. Since the first of January no new large influenza epidemics have been reported from any part of the world.

VII. Recent Communications

Milwaukee (information supplied by Dr. E.R. Krumbiegel, Commissioner of Health)

For the past 5 months the Milwaukee Health Department Laboratories have been performing HI tests for Asian influenza on excess serum received in the veneral disease laboratory. Most of the sera are from young persons getting pre-marital exams. Only those specimens from persons who have not had influenza vaccine are used. Forty specimens have been tested, every 2 weeks, and a serum of known titer is used as a laboratory control. Although the numbers are not large, the trends are consistent and in keeping with the known incidence of influenza in the community.

Two Week Period Ending	Percentage of Specimens with HI Antibody Titer of 1:10 or Greater
October 18, 1957	32.5
November 1, 1957	30.0
November 15, 1957	40.0
November 28, 1957	52.5
December 13, 1957	52.5
December 27, 1957	46.5
January 10, 1958	35.0
January 24, 1958	30.0
February 7, 1958	57.5

Kansas City (reported by Dr. Michael L. Furcolow, Kansas City Field Station)

During the past two weeks there has been no major outbreak of influenza although sporadic cases continue. The pneumonic death rate continues to be high with 16 deaths recorded during this time. At least five cases seem to be related to influenza. These flu related deaths occurred in persons aged 38, 57, 83, 70 and 53 years. Death occurred from five to fourteen days after influenza, and there was no history of influenza during the fall epidemic. Alcoholism, diabetes, or hypertension were underlying diseases in each of the flu related deaths.

Florida (reported by Dr. James O. Bond, Florida State Board of Health)

A community-wide epidemic of febrile respiratory illness forced the closing of schools in Osceola County, Florida on February 20 and 21. Schools reopened February 24. This is the first report of this sort received by the Influenza Surveillance Unit since November-December 1957. Dr. Bond reports that physicians in the county described an illness of short duration with sudden onset, high fever, myalgia, and upper respiratory symptoms. Complications included otitis media, diarrhea, 'nephritis', and only one or two cases of pneumonia. No deaths were reported from the county as a result of the epidemic. It is of interest that Osceola County experienced a community-wide epidemic of Asian strain influenza during the fall. Laboratory specimens from the current epidemic will be studied at the State Laboratory.

Dr. Bond also reports that isolations of type B influenza virus were obtained from two influenza cases in late December and early January. One case occurred in Vero Beach; the other in Jacksonville. During January respiratory illnesses were unusually prevalent in most parts of the state.